

11 (b) a mercapto alkanol ester of a monocarboxylic acid
having the formula:

RCOOR'SH

wherein R is a linear or branched alkyl or alkenyl, aryl or
aralkyl containing at least two carbon atoms; and R' designates
a C₂ to C₁₈ alkylene.

At line 1 of claims 80 and 81, delete "79" and substitute
therefore -- 71 --.

12 85. (Amended) A vinyl halide resin composition
comprising:

(a) a vinyl halide resin;
(b) a mono- or diorganotin compound wherein at least one
atom bonded to tin is sulfur, the sulfur being selected from the
group consisting of the residue of a mercaptan, the residue of a
mercapto acid, the residue of a mercapto alcohol, and the
residue of a mercapto alcohol ester; and

(c) a mercapto alkanol ester of a monocarboxylic acid
having the formula:

RCOOR'SH

wherein R is a linear or branched alkyl or alkenyl, aryl or
aralkyl containing at least two carbon atoms; and R' designates
a C₂ to C₁₈ alkylene.

At line 1 of claims 94 and 95, delete "93" and substitute
therefore -- 85 --.

13 102. (Amended) A composition comprising [:] a product
produced by mixing:

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(i) a mono- or diorganotin compound wherein at least one atom bonded to tin is sulfur, the sulfur being selected from the group consisting of the residue of a mercaptan, the residue of a mercapto acid, the residue of a mercapto alcohol, and the residue of a mercapto alcohol ester; and

(ii) a mercapto alkanol ester of a monocarboxylic acid having the formula:



wherein R is a linear or branched alkyl or alkenyl, aryl or aralkyl containing at least two carbon atoms; and R' designates a C₂ to C₁₈ alkylene.

At line 1 of claim 111, delete "110" and substitute therefore -- 102 --.

119. (Amended) A method of stabilizing a vinyl halide resin comprising the steps of:

(a) adding to the vinyl halide resin a mono- or diorganotin compound wherein at least one atom bonded to tin is sulfur, the sulfur being selected from the group consisting of the residue of a mercaptan, the residue of a mercapto acid, the residue of a mercapto alcohol, and the residue of a mercapto alcohol ester; and

(b) adding to the vinyl halide resin a mercapto alkanol ester of a monocarboxylic acid having the formula:



wherein R is a linear or branched alkyl or alkenyl, aryl or aralkyl containing at least two carbon atoms; and R' designates a C₂ to C₁₈ alkylene;

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Cont.

the mono- or diorganotin compound and the mercapto alkanol ester of a monocarboxylic acid being present in an amount effective to stabilize the vinyl halide resin.

At line 1 of claims 128 and 129, delete "127" and substitute therefore -- 119 --.

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134. (Amended) A method of stabilizing a vinyl halide resin comprising the step of [:] adding to the vinyl halide resin in an amount effective to stabilize the vinyl halide resin a product produced by mixing:

(a) a mono- or diorganotin compound wherein at least one atom bonded to tin is sulfur, the sulfur being selected from the group consisting of the residue of a mercaptan, the residue of a mercapto acid, the residue of a mercapto alcohol, and the residue of a mercapto alcohol ester; and

(b) a mercapto alkanol ester of a monocarboxylic acid having the formula:

RCOOR' SH

wherein R is a linear or branched alkyl or alkenyl, aryl or aralkyl containing at least two carbon atoms; and R' designates a C₂ to C₁₈ alkylene.

At line 1 of claims 143, 144 and 146, delete "142" and substitute therefore -- 134 --.

Add new claims 192 to 233:

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192. A composition comprising:

(a) a mono- or di- organotin compound selected from the group consisting of di-n-octyltin bis-(isooctyl mercapto acetate); di-n-butyltin bis-(isooctyl mercapto acetate); a

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~~mixture of an anhydride of thiobutyl stannic acid with di-n-butyltin bis-(isodecyl mercapto acetate); and a condensation polymer of butyl stannic acid and butyl thiostannic acid; and~~

~~(b) a mercapto alkanol ester of a monocarboxylic acid.~~

193. The composition of claim ²³⁷ ~~192~~, wherein the mercapto alkanol ester of a monocarboxylic acid has the formula:



wherein R is a linear or branched alkyl or alkenyl, aryl or aralkyl containing at least two carbon atoms; and R' designates a C₂ to C₁₈ alkylene.

194. The composition of claim ²³⁷ ~~192~~, wherein R contains 6 to 38 carbon atoms.

195. The composition of claim ²³⁷ ~~192~~, wherein R contains 8 to 18 carbon atoms.

196. The composition of claim ²³⁷ ~~192~~, wherein R contains 2 to 6 carbon atoms.

197. The composition of claim ²³⁷ ~~192~~, the monocarboxylic acid is selected from the group consisting of caprylic, pelargonic, capric, undecanoic, lauric, myristic, palmitic, stearic, isostearic, and mixtures thereof.

198. The composition of claim ²³⁷ ~~192~~, wherein the mercapto alkanol ester of a monocarboxylic acid is selected from the group consisting of mercapto ethyl stearate, 3-thio-glyceryl myristate, mercapto ethyl palmitate and mercapto ethyl myristate.

X (6)
cont

199. A vinyl halide resin composition comprising:

(a) a vinyl halide resin;

(b) a mono- or di- organotin compound selected from the group consisting of di-n-octyltin bis-(isooctyl mercapto acetate); di-n-butylin bis-(isooctyl mercapto acetate); a mixture of an anhydride of thiobutyl stannic acid with di-n-butylin bis-(isodecyl mercapto acetate); and a condensation polymer of butyl stannic acid and butyl thiostannic acid; and

(c) a mercapto alkanol ester of a monocarboxylic acid.

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200. The vinyl halide resin composition of claim ²³⁹ ₁₉₉, wherein the mercapto alkanol ester of a monocarboxylic acid has the formula:



wherein R is a linear or branched alkyl or alkenyl, aryl or aralkyl containing at least two carbon atoms; and R' designates a C₂ to C₁₈ alkylene.

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201. The vinyl halide resin composition of claim ²³⁹ ₁₉₉, wherein R contains 6 to 38 carbon atoms.

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202. The vinyl halide resin composition of claim ²³⁹ ₁₉₉, wherein R contains 8 to 18 carbon atoms.

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203. The vinyl halide resin composition of claim ²³⁹ ₁₉₉, wherein R contains 2 to 6 carbon atoms.

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204. The vinyl halide resin composition of claim ²³⁹ ₁₉₉, the monocarboxylic acid is selected from the group consisting of caprylic, pelargonic, capric, undecanoic, lauric, myristic, palmitic, stearic, isostearic, and mixtures thereof.

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205. The vinyl halide resin composition of claim²³⁹,¹⁹⁹, wherein the mercapto alkanol ester of a monocarboxylic acid is selected from the group consisting of mercapto ethyl stearate, 3-thio-glyceryl myristate, mercapto ethyl palmitate and mercapto ethyl myristate.

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206. The vinyl halide resin composition of claim²³⁹,¹⁹⁹, wherein the mercapto alkanol ester of a monocarboxylic acid is present in the range of 0.1 % wt. to 5 % wt. of the vinyl halide resin.

207. The vinyl halide resin composition of claim²³⁹,¹⁹⁹, wherein the vinyl halide resin is polyvinyl chloride.

208. A composition comprising a product produced by mixing:

(a) a mono- or di- organotin compound selected from the group consisting of di-n-octyltin bis-(isooctyl mercapto acetate); di-n-butylin bis-(isooctyl mercapto acetate); a mixture of an anhydride of thiobutyl stannic acid with di-n-butylin bis-(isodecyl mercapto acetate); and a condensation polymer of butyl stannic acid and butyl thiostannic acid; and

(b) a mercapto alkanol ester of a monocarboxylic acid.

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209. The composition of claim²⁴¹,²⁰⁸, wherein the mercapto alkanol ester of a monocarboxylic acid has the formula:



wherein R is a linear or branched alkyl or alkenyl, aryl or aralkyl containing at least two carbon atoms; and R' designates a C₂ to C₁₈ alkylene.

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110. The composition of claim ²⁴¹ 208, wherein R contains 6 to 38 carbon atoms.

111. The composition of claim ²⁴¹ 208, wherein R contains 2 to 6 carbon atoms.

112. The composition of claim ²⁴¹ 208, the monocarboxylic acid is selected from the group consisting of caprylic, pelargonic, capric, undecanoic, lauric, myristic, palmitic, stearic, isostearic, and mixtures thereof.

113. cont'd
113. The composition of claim ²⁴¹ 208, wherein the mercapto alkanol ester of a monocarboxylic acid is selected from the group consisting of mercapto ethyl stearate, 3-thio-glyceryl myristate, mercapto ethyl palmitate and mercapto ethyl myristate.

114. The composition of claim ²⁴¹ 208, further comprising a vinyl halide resin.

115. The composition of claim 214, wherein the product produced by mixing the organotin compound and the mercapto alkanol ester of a monocarboxylic acid are present in an amount effective to stabilize the vinyl halide resin against heat or light.

116. The composition of claim 214, wherein the mercapto alkanol ester of a monocarboxylic acid is present in the range of 0.1 % wt. to 5 % wt. of the vinyl halide resin.

117. The composition of claim 214, wherein the vinyl halide resin is polyvinyl chloride.

118. A method of stabilizing a vinyl halide resin comprising the steps of:

(a) adding to the vinyl halide resin a mono- or di-organotin compound selected from the group consisting of di-n-octyltin bis-(isooctyl mercapto acetate); di-n-butyltin bis-(isooctyl mercapto acetate); a mixture of an anhydride of thiobutyl stannic acid with di-n-butyltin bis-(isodecyl mercapto acetate); and a condensation polymer of butyl stannic acid and butyl thiostannic acid; and

(b) adding to the vinyl halide resin a mercapto alkanol ester of a monocarboxylic acid.

219. The method of claim ²⁴³₂₁₈, wherein the mercapto alkanol ester of a monocarboxylic acid has the formula:



wherein R is a linear or branched alkyl or alkenyl, aryl or aralkyl containing at least two carbon atoms; and R' designates a C₂ to C₁₈ alkylene.

220. The method of claim ²⁴³₂₁₈, wherein R contains 6 to 38 carbon atoms.

221. The method of claim ²⁴³₂₁₈, wherein R contains 8 to 18 carbon atoms.

222. The method of claim ²⁴³₂₁₈, wherein R contains 2 to 6 carbon atoms.

223. The method of claim ²⁴³₂₁₈, the monocarboxylic acid is selected from the group consisting of caprylic, pelargonic, capric, undecanoic, lauric, myristic, palmitic, stearic, isostearic, and mixtures thereof.

224. The method of claim ²⁴³₂₁₈, wherein the mercapto alkanol ester of a monocarboxylic acid is selected from the group

consisting of mercapto ethyl stearate, 3-thio-glyceryl myristate, mercapto ethyl palmitate and mercapto ethyl myristate.

H 225. The method of claim 218, wherein the vinyl halide resin is polyvinyl chloride.

H 226. A method of stabilizing a vinyl halide resin comprising the step of adding to the vinyl halide resin in an amount effective to stabilize the vinyl halide resin a product produced by mixing:

(a) a mono- or di- organotin compound selected from the group consisting of di-n-octyltin bis-(isooctyl mercapto acetate); di-n-butyltin bis-(isooctyl mercapto acetate); a mixture of an anhydride of thiobutyl stannic acid with di-n-butyltin bis-(isodecyl mercapto acetate); and a condensation polymer of butyl stannic acid and butyl thiostannic acid; and

(b) a mercapto alkanol ester of a monocarboxylic acid.

H 227. The method of claim 226, wherein the mercapto alkanol ester of a monocarboxylic acid has the formula:



wherein R is a linear or branched alkyl or alkenyl, aryl or aralkyl containing at least two carbon atoms; and R' designates a C₂ to C₁₈ alkylene.

H 228. The method of claim 226, wherein R contains 6 to 38 carbon atoms.

H 229. The method of claim 226, wherein R contains 8 to 18 carbon atoms.